

## AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

1. (Previously Presented) A data carrier having a semiconductor chip (5) with at least one memory containing an operating program which is able to execute at least one operation ( $h$ ), the execution of the operation ( $h$ ) requiring input data ( $x$ ) and the execution of the operation ( $h$ ) generating output data ( $y$ ), characterized in that

the operation ( $h$ ) is disguised before its execution,

the disguised operation ( $h_{RD}$ ) is executed with disguised input data ( $x \otimes R_D$ ), and

the disguising of the operation ( $h$ ) and the input data ( $x$ ) is coordinated such that the execution of the disguised operation ( $h_{RD}$ ) with disguised input data ( $x \otimes R_D$ ) yields output data ( $y$ ) identical with the output data ( $y$ ) determined upon execution of the operation ( $h$ ) with input data ( $x$ ),

whereby disguising operation ( $h$ ) prevents analysis of said operation ( $h$ ) and exposure of secret information about said semiconductor chip should a potential attacker intercept signal patterns generated during execution of said disguised operation ( $h_{RD}$ ).

2. (Original) A data carrier according to claim 1, characterized in that at least one random number ( $R_D$ ) enters into the determination of the disguised operation ( $h_{RD}$ ) and the disguised input data ( $x \otimes R_D$ ).

3. (Currently Amended) A data carrier according to claim 1, characterized in that the ~~determination of the disguised operation ( $h_{RD}$ ) and the disguised input data ( $x \otimes R_D$ ) is effected~~

are respectively generated from the input data ( $x$ ) and the operation ( $h$ ) with the aid of XOR operations.

4. (Previously Presented) A data carrier according to claim 1, characterized in that the disguised operation ( $h_{RI}$ ) is permanently stored in the data carrier in advance.

5. (Original) A data carrier according to claim 4, characterized in that at least two disguised operations ( $h_{RI}$ ,  $h_{RI}$ ) are permanently stored in the data carrier in advance and one of the stored disguised operations ( $h_{RI}$ ,  $h_{RI}$ ) is selected randomly when a disguised operation is to be executed.

6. (Previously Presented) A data carrier according to claim 1, characterized in that the disguised operation ( $h_{RI}$ ) is recalculated before its execution and the at least one random number ( $R_I$ ) is redetermined for said calculation.

7. (Previously Presented) A data carrier according to claim 1, characterized in that the operation ( $h$ ) is realized by a table stored in the data carrier which establishes an association between the input data ( $x$ ) and the output data ( $y$ ).

8 (Original) A data carrier according to claim 7, characterized in that the disguising of the input data ( $x$ ) contained in the table is effected by combination with the at least one random number ( $R_I$ ).

9. (Previously Presented) A data carrier having a semiconductor chip (5) with at least one memory containing an operating program which is able to execute at least one operation ( $h$ ), the execution of the operation ( $h$ ) requiring input data ( $x$ ) and the execution of the operation ( $h$ ) generating output data ( $y$ ), characterized in that

the operation ( $h$ ) is disguised before its execution,

the disguised operation ( $h_{RI}$ ) is executed with disguised input data ( $x \otimes R_I$ ),

the disguising of the operation ( $h$ ) and the input data ( $x$ ) is coordinated such that the execution of the disguised operation ( $h_{R1R2}$ ) with disguised input data ( $x \otimes R_1$ ) yields output data ( $y \otimes R_2$ ) which are disguised relative to the output data ( $y$ ) determined upon execution of the operation ( $h$ ) with input data ( $x$ ), and

the output data ( $y$ ) can be determined from the disguised output data ( $y \otimes R_2$ ) with the aid of data ( $R_2$ ) used for disguising the operation ( $h$ ),

whereby disguising operation ( $h$ ) prevents analysis of said operation ( $h$ ) and exposure of secret information about said semiconductor chip should a potential attacker intercept signal patterns generated during execution of said disguised operation ( $h_{R1}$ ).

10. (Original) A data carrier according to claim 9, characterized in that at least one random number ( $R_1$ ) enters into the determination of the disguised input data ( $x \otimes R_1$ ) and at least two random numbers ( $R_1$ ,  $R_2$ ) enter into the determination of the disguised operations ( $h_{R1R2}$ ).

11. (Currently Amended) A data carrier according to claim 9, characterized in that the ~~determination of the disguised operation ( $h_{R1R2}$ ) and the disguised input data ( $x \otimes R_1$ ) is effected~~  
are respectively generated from the input data ( $x$ ) and the operation ( $h$ ) with the aid of XOR operations.

12. (Currently Amended) A data carrier according to claim 9, characterized in that the disguised operation ( $h_{R1R2}$ ) is permanently stored in the data carrier in advance.

13. (Original) A data carrier according to claim 12, characterized in that at least two disguised operations ( $h_{R1R2}$ ,  $h_{R1'R2'}$ ) are permanently stored in the data carrier in advance and one of the stored disguised operations ( $h_{R1R2}$ ,  $h_{R1'R2'}$ ) is selected randomly when a disguised operation is to be executed.

14. (Original) A data carrier according to claim 13, characterized in that the random numbers  $(R_1, R_2)$  for determining the first disguised operation  $(h_{R_1 R_2})$  are inverse to the random numbers  $(R_1', R_2')$  for determining the second disguised operation  $(h_{R_1' R_2'})$  with respect to the combination used for determining the disguised operations  $(h_{R_1 R_2}, h_{R_1' R_2'})$ .

15. (Previously Presented) A data carrier according to claim 9, characterized in that the disguised operation  $(h_{R_1 R_2})$  is recalculated before its execution and the random numbers  $(R_1, R_2)$  are redetermined for said calculation.

16. (Previously Presented). A data carrier according to claim 9, characterized in that the operation  $(h)$  is realized by a table stored in the data carrier which establishes an association between the input data  $(x)$  and the output data  $(y)$ .

17. (Original) A data carrier according to claim 16, characterized in that the disguising of the input data  $(x)$  contained in the table is effected by combination with the at least one random number  $(R_1)$  and the disguising of the output data  $(y)$  contained in the table is effected by combination with the at least one further random number  $(R_2)$ .

18. (Previously Presented) A data carrier according to claim 1, characterized in that the operation  $(h)$  is a nonlinear operation with respect to the combination used for disguising the operation  $(h)$ .